

IN THE CLAIMS:

1. (Currently Amended) An aluminum alloy for rapidly cooled welding, the alloy comprising consisting essentially of by weight:

Mg: 0.4 to 7.0%;

Cu: 0.05 to 1.0%;

at least one kind of Mn: 0.8 to 2.5%, Cr: 0.35 to 2.0% and Fe: 0.7 to 1.5%; and

the balance of Al and inevitable impurities; and

wherein the aluminum alloy has a welding joint efficiency of not less than 1.0 in a rapidly cooled welding method.

2. (Original) An aluminum alloy for rapidly cooled welding according to claim 1, wherein the alloy contains at least one kind of V: 0.5 to 1.0 wt %, Zr: 2.0 to 2.5 wt % and Ni: 3.0 to 3.5 wt %.

3. (Withdrawn) A welding method for an aluminum alloy recited in claim 1, the method comprising:

a step of welding; and

a step of cooling welded portion at 500 to 10000°C./s of an average cooling rate from the melting point to 200°C.

4. (New) An aluminum alloy for rapidly cooled welding, the alloy comprising by weight:

Mg: 0.4 to 7.0%;

Cu: 0.05 to 1.0%;

Fe: 0.7 to 1.5%;

optionally, at least one kind of Mn: 0.8 to 2.5% and Cr: 0.35 to 2.0%; and

the balance of Al and inevitable impurities;
wherein the aluminum alloy has a welding joint efficiency of not less than 1.0 in a rapidly cooled welding method.

5. (New) The aluminum alloy for rapidly cooled welding according to claim 4, wherein the alloy contains at least one kind of V: 0.5 to 1.0 wt%, Zr: 2.0 to 2.5 wt% and Ni: 3.0 to 3.5 wt%.

6. (New) An aluminum alloy for rapidly cooled welding according to claim 1, wherein a weld metal is cooled at a range of 1000 to 8000°C/s from the melting point to 200°C after welding.

7. (New) An aluminum alloy for rapidly cooled welding, the alloy comprising by weight:

Mg: 0.4 to 7.0%;

Cu: 0.05 to 1.0%;

Fe: 0.7 to 1.5%;

Mn: 0.8 to 2.5%

Cr: 0.35 to 2.0%; and

the balance of Al and inevitable impurities;

wherein the aluminum alloy has a welding joint efficiency of not less than 1.0 in a rapidly cooled welding method.